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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,793	11/07/2003	Leonid B. Galperin	107404	4817

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EXAMINER	
HAILEY, PATRICIA L	
ART UNIT	**PAPER NUMBER**
1755	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/705,793	GALPERIN ET AL.	
	Examiner	Art Unit	
	Patricia L. Hailey	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) *14-27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/09/04; 11/07/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-13, drawn to a catalyst, classified in class 502, subclass 64.

II. Claims 14-27, drawn to a process for producing acyclic paraffins, classified in class 585, subclass 752.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and Group II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case, the product can be used in a materially different process such as reforming of naphtha.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Frank Molinaro on April 6, 2006 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. ***Claims 1-13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12-21 of copending Application No. 11/268,835.***

Although the conflicting claims are not identical, they are not patentably distinct from each other because both respective sets of claims are directed to catalysts for opening cyclic paraffins, the respective catalysts comprising the same or similarly named components. Claim 12 of the copending '835 application characterizes the molecular sieve as having "an OH peak shift in its CO FTIR spectrum of less than 310 cm^{-1}", yet exemplifies the molecular sieve with the same elements as those recited in claim 13 of the instant application (i.e., MAPSOs, SAPOs, etc.). The same reasoning applies to instant claim 12, which defines the molecular sieve as "selected from those having 8, 10, or 12 ring pores and having weak to medium acidity".

Because both applications recite the same or similar molecular sieves, one of ordinary skill in the art would reasonably expect said sieves to exhibit the same characteristics, whether or not they are explicitly claimed.

Claims 1-11 and 13 in the instant application respectively correspond to claims 12-21 in the copending '835 application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller (U. S. Patent No. 4,859,312).

Miller teaches a catalyst comprising a silicoaluminophosphate molecular sieve (e.g., SAPO-11, SAPO-41), and platinum or palladium. See col. 4, lines 39-44 of Miller.

In addition to the platinum or palladium, non-noble metals may also be present; the amount of these metals present in the catalyst ranges from about 0.01 to 10 %, by weight of the molecular sieve. The metals may be introduced to the molecular sieve via ion exchange, impregnation, or by occlusion during sieve preparation. See col. 8, line 50 to col. 9, line 13 of Miller.

The catalyst may be in the form of a granule or powder, and may also be compacted into a more usable form (usually with a silica or alumina binder), or pills, prills, spheres, extrudates, or other shapes to accord adequate catalyst-reactant contact. See col. 9, lines 14-24 of Miller.

The molecular sieves may also be composited with other materials resistant to temperatures and other conditions, e.g., silica or metal oxides, or with porous inorganic

oxide matrix materials such as silica, alumina, silica-alumina, and magnesia. See col. 9, lines 25-66 of Miller.

The recitation "for opening cyclic paraffins" has not been given patentable weight because the recitation occurs in the preamble, and is considered to be a statement of intended use. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *MPEP 2111.02.*

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

In view of these teachings, Miller anticipates claims 1-13.

5. ***Claims 1-9 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hammerman et al. (U. S. Patent No. 5,898,090).***

Hammerman et al. disclose a catalyst comprising a SAPO molecular sieve having critical gradients of catalyst components. See col. 2, lines 39-42 of Hammerman et al.

The catalyst may also comprise molecular sieves such as ELAPSOs, GaAPSO, BeAPSO, and CrAPSO (considered to read upon "MAPSOs"). See col. 4, line 36 to col. 5, line 6 of Hammerman et al.

The molecular sieve is preferably composited with a binder for convenient formation of catalyst particles. Examples of the binder include refractory inorganic oxides, such as alumina, titania, zinc oxide, silica-alumina, and magnesia. See col. 6, lines 9-29 of Hammerman et al.

The shape of the catalyst is preferably an extrudate, such as cylinders or spheres. See col. 7, lines 5-39 of Hammerman et al.

With respect to the catalyst components, platinum group metals such as platinum, palladium, rhodium, ruthenium, osmium, and iridium are preferred essential components. This component generally comprises from about 0.01 to about 2 mass % of the final catalyst composite. Further, the platinum group component may be incorporated into the catalyst composite "in any suitable manner", such as by adding the platinum group metal component at the time of compositing the molecular sieve and binder, or by compositing the metal with the binder prior to co-extruding the molecular sieve and binder. Or, the calcined molecular sieve/binder may be impregnated with a water-soluble, decomposable

solution of the platinum group metal. See col. 7, line 40 to col. 8, line 6 of Hammerman et al.

The catalyst composite may also contain modifying components such as rhenium, tin, germanium, zinc, uranium, dysprosium, in catalytically effective amounts to effect a homogeneous or stratified distribution. See col. 8, lines 7-15 of Hammerman et al.

The recitation "for opening cyclic paraffins" has not been given patentable weight because the recitation occurs in the preamble, and is considered to be a statement of intended use. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *MPEP 2111.02.*

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

In view of these teachings, Hammerman et al. anticipate claims 1-19 and 11-13.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. ***Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hammerman et al. (U. S. Patent No. 5,898,090).***

Hammerman et al. is relied upon for its teachings in the above 102(b) rejection. While this reference teaches the feasibility in including modifying metal components in Patentees' catalysts (col. 8, lines 7-15), the reference does not disclose a specifically desired amount or percentage range for said modifying components, as recited in claim 10.

However, Hammerman et al., at col. 8, lines 12-15 state:

"Catalytically effective amounts of such metal modifiers may be incorporated into the catalyst by any means known in the art to effect a homogeneous or stratified distribution."

From this, one of ordinary skill in the art would reasonably expect to perform routine experimentation to determine the optimal amounts of these modifying components, in an endeavor to effect a homogeneous or stratified distribution, or to modify the effect of the platinum group metal component present in Patentees' catalyst. See also col. 8, lines 7-10 of Hammerman et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (571) 272-1369. The examiner can normally be reached on Mondays-Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patricia L. Hailey/plh
Examiner, Art Unit 1755
April 28, 2006

J.A. LORENGO
SUPERVISORY PATENT EXAMINER